

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-023693**Date Inspected:** 09-May-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC) Chanxing Island**Location:** Shanghai, China**CWI Name:** Mr. Sun Tian Liang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA), Vibin Kumar Selvanayaham, was present during the times noted above for observations relative to the work being performed.

Ultrasonic Testing (UT) – NWIT Document No: 009072

This QA inspector performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as OBG Segment 13AW. The weld designations reviewed are as follows:

1. SEG3013N-211, 205, 200, 195, 190, 185, 180, 175
2. SEG3013N-170, 165, 155, 160, 150, 145, 140, 135, 201
3. SEG3013L-098, 092, 100, 102, 103, 104
4. SEG3013Q-234, 232, 230, 228, 226, 224
5. SEG3013Q-222, 220, 216, 214, 121, 201, 218

Description of Incident: During the Quality Assurance Ultrasonic Testing (UT) verification of weld located on OBG Segment 13AW, this Quality Assurance Inspector (QA) discovered the following issue:

- Two (2) Class “A” indication measuring approximately 20mm in length.
- The first indication rating is +8dB and length approximately 20mm.
- The nominal thickness of the plate is 28mm and depth of the indication approximately 23mm.

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- The indication is located on the weld joint identified as SEG3013Q-201.
- The “Y” location for this indication is approximately 105mm from top of this RS Stiffener.
- The weld is a Complete Joint Penetration (CJP) “T” weld joint joining Bottom Plate RS Stiffener to Floor Beam (FB3178A) at panel point 118.
- The second indication rating is +7dB and length approximately 20mm.
- The nominal thickness of the plate is 22mm and depth of the indication approximately 17mm.
- The indication is located on the weld joint identified as SEG3013N-201.
- The “Y” location for this indication is approximately 25mm from top of this RS Stiffener.
- The weld is a Complete Joint Penetration (CJP) “T” weld joint joining side plate RS Stiffener to Floor Beam (FB3183A) at panel point 118.5.
- The indication is clearly marked by QA on/near the weld.
- This weld is designated as non Seismic Performance Critical Member (non SPCM).
- OBG Segment 13AW is located in Trail Assembly Yard South Side.
- The Notice of Witness Inspection Number (NWIT) is 009072
- The indication is located within the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.
- As per the contract documents, ZPMC’s QC personnel are required to perform 100% UT inspection of this weld. See the attached picture.

OBG Trail Assembly

This QA Inspector observed the following work in progress:

Flux Core Arc Welding (FCAW) welding of weld joint SA3126-016~019-005 and 007 located on bottom plate connected SA3126 at panel point 123 to 123.5 FL2 side of OBG Segment 13CW. ZPMC Welder is identified as 066687. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2231-ESAB.

FCAW welding of weld joint SEG3015L-111, 116 and 146 located on Side plate RS stiffeners at panel point 122 to 122.5 of OBG Segment 13CW. ZPMC Welder is identified as 045240. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-FCAW-3G-(3F)-FCM-ESAB-Repair-1, which is used as per Welding Repair Report (WRR) B-WRR-20927.

FCAW welding of weld joint SEG3014C-102, 106 and 130 located on Side plate RS stiffeners at panel point 122 to 122.5 of OBG Segment 13BW. ZPMC Welder is identified as 045240. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-FCAW-3G-(3F)-FCM-ESAB-Repair-1, which is used as per Welding Repair Report (WRR) B-WRR-20927.

Shielded Metal Arc Welding (SMAW) welding of weld joint DP3128-001-016, 030, 044 and 058 located on deck panel longitudinal diaphragm to deck panel of OBG Segment 13BW. ZPMC Welder is identified as 045196. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-3G-(3F)-FCM-Repair-1, which is used as per Welding Repair

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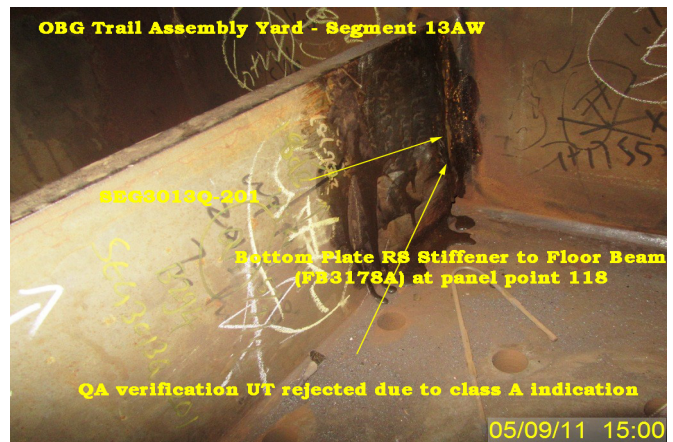
Report (WRR) B-WRR-20905.

SMAW welding of weld joint AH3003-001 located on Architecture House side plate to edge plate of OBG Segment 13CW. ZPMC Welder is identified as 045196. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-FCAW-1G-(1F)-FCM-ESAB-Repair-1, which is used as per Welding Repair Report (WRR) B-WRR-20917.

FCAW welding of weld joint SEG3015K-207 to 220 located on vertical plate RS stiffener to floor beam at panel point 122.5 of OBG Segment 13CW. ZPMC Welder is identified as 045143. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2231-ESAB.

FCAW welding of weld joint SEG3014N-114, 118, 122, 126, 130, 134 and 138 located on floor beam RS stiffener at panel point 122 of OBG Segment 13BW. ZPMC Welder is identified as 066687. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2233-ESAB.

general compliance with the applicable contract documents.



Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By: Kumar,Vibin

Quality Assurance Inspector

Reviewed By: Patel,Hiranch

QA Reviewer